

**SYSTEM FOR DIRECTED MOLECULAR INTERACTION
IN SURFACE PLASMON RESONANCE ANALYSIS**

ABSTRACT OF THE DISCLOSURE

Disclosed is apparatus and method for controlled surface plasmon resonance analysis having a surface plasmon resonance sensor (200) with a derivatized surface plasmon layer (116) in optical communication with the sensor, derivatizing the surface plasmon layer and placing an analyte detection chamber (102) in fluid communication with the derivatized surface plasmon layer. The chamber is adapted (118, 120) for the generation of a molecular interaction bias across the chamber. A conjugate is provided between an analyte and a bias responsive element, wherein the analyte is reactive with the derivatized surface plasmon layer and the bias responsive element changes the response of the analyte to the molecular interaction bias. A conjugated analyte may be introduced into the chamber, generating a molecular interaction.

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